REMARKS

The applicant wishes to thank the examiner for indicating that the applicant's arguments, filed on November, 12, 2007, with respect to the rejections of claims 1-59 were persuasive, and for withdrawing those rejections.

Claims 1-59 were pending as of the action mailed on July 22, 2008. Claims 1, 28, 29, 56, 57, and 59 are in independent form.

Claims 1, 3-23, 25-29, 31-51, and 53-59 are being amended. No new matter has been added. Support for the amendments to claims 1, 8, 28, 36, 57, and 59 can be found in the specification, for example, on page 6, lines 10-24; and page 10, lines 13-18. Support for the amendments to claims 29 and 56 can be found in the specification, for example, on page 6, lines 10-24; page 10, lines 13-18; and page 38, line 11 to page 39, line 12.

Reconsideration of the action are respectfully requested in light of the following remarks.

Information Disclosure Statement

The applicant is filing an Information Disclosure Statement with this reply, and would like to request that the examiner consider the references listed on an accompanying PTO-1449 form.

Specification

The specification was objected to for allegedly failing to provide proper antecedent basis for the claimed subject matter. In particular, the examiner stated that: "'Computer-readable medium' of claims 29 and 56 are not defined in the specification."

Although the applicant respectfully disagrees, to expedite prosecution, and without acquiescing in the Office's position, the applicant has amended claims 29 and 56 to overcome the rejection.

Section 101 Rejections

Claims 57-59 were rejected under 35 U.S.C. § 101 as allegedly directed to non-statutory subject matter.

The examiner stated that:

> The claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category ... .

The applicant respectfully disagrees. When applying 35 U.S.C. § 101, a claim must be construed in light of paragraph 6 of 35 U.S.C. § 112. *See, e.g., In re Allapat*, 33 F.3d 1526, 1540-41, 31 USPQ2d 1545 (Fed. Cir. 1994) ("As recently explained in *In re Donaldson*, 16 F.3d 1189, 1193, 29 USPQ2d 1845, 1050 (Fed.Cir.1994), the PTO is not exempt from following the statutory mandate of § 112 ¶ 6 ... The Board majority therefore erred as a matter of law in refusing to apply § 112 ¶ 6 in rendering its § 101 patentable subject matter determination.").

Paragraph 6 of 35 U.S.C. § 112 states that:

> An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and <u>such claim shall be construed to cover the corresponding structure, material, or acts</u> described in the specification and equivalents thereof. (35 U.S.C. § 112 ¶ 6) (emphasis added)

The applicant respectfully submits that claims 57-59 are directed to statutory subject matter within the meaning of 35 U.S.C. § 101 in light of paragraph 6 of 35 U.S.C. § 112. Therefore, the applicant requests that the rejection be withdrawn.

Section 102 Rejections

Claims 1-7, 24, 26, 29-35, 52, 54, and 57 were rejected under 35 U.S.C. § 102(b) as allegedly anticipated by *Image Retrieval using a Hierarchy of Clusters*, ACM March 2001, Lecture Notes In Computer Science, Volume 2013, pages 377-386 ("Stan").

Claim 1 and its dependent claims

The examiner asserted that:

> Stan teaches combining information pertaining to a feature common to a
> plurality of reference objects to produce composite reference information
> representing criteria for a search (i.e. type and nature of object features are
> used for indexing and retrieval, page 377, lines 13-25), and comparing the
> composite reference information to information pertaining to the same
> feature for each respective one of a plurality of media objects in a collection
> of media objects to identify one or more media objects (i.e. comparing
> image indexes allows similar images to be identified, page 380, lines
> 18-26), wherein a non-Euclidian function is used either to combine the
> information pertaining to the feature, or to compare the composite reference
> information to information pertaining to the same feature (i.e.
> non-Euclidean functions are used to determine features, page 378, lines
> 25-34).

The applicant respectfully disagrees. Nevertheless, as a clarification, the applicant has amended claim 1 to recite combining information obtained based on each of a plurality of reference objects pertaining to a first common feature to produce composite reference information that specifies the first common feature as a search criterion.

The applicant respectfully submits that the portions of Stan relied upon by the examiner do not teach or suggest combining information obtained based on each of the plurality of reference objects pertaining to the first common feature to produce <u>composite reference information that specifies the first common feature as the search criterion</u>.

A portion of Stan relied upon by the examiner states that:

> While it is perfectly feasible to identify a desired image from a small
> collection simply by browsing, techniques that are more effective are
> needed with collections containing thousands, or millions of items. The
> current image retrieval techniques can be classified according to the <u>type
> and nature of the features used for indexing and retrieving</u>. Keyword
> indexing techniques manually assign keywords or classification codes to
> each image when it is first added to the collection and use these descriptor
> as retrieval keys at search time. Their advantages consist of high
> expressive power, possibility to describe image content from the level of
> primitive features to the level of abstract features, involving a significant

> amount of reasoning about the meaning and purpose of the objects or
> scenes depicted. (Page 377, lines 15-25) (emphasis added)

The passage states that each image, in a collection, is classified according to the type and nature of its features. The applicant respectfully asserts that <u>classifying</u> images is not the same as <u>specifying</u> a first common feature <u>as a search criterion</u>.

The applicant submits that claim 1 is allowable for at least this reason.

Another portion of Stan relied upon by the examiner states that:

> Clustering methods require that an index of proximity or associations be
> established between pairs of patterns [10]. A proximity index is either a
> similarity or dissimilarity. The more two images resemble each other, the
> larger a similarity index and the smaller a dissimilarity index will be. (Page
> 380, lines 18-26)

Stan discloses <u>calculating a similarity or dissimilarity</u> between images. The applicant respectfully asserts that calculating a similarity or dissimilarity between images is not the same as combining information obtained based on each of the plurality of reference objects pertaining to the first common feature to produce <u>composite reference information that specifies a first common feature as a search criterion</u>.

The applicant submits that claim 1 is allowable for at least this additional reason.

The examiner also cites to page 378, lines 25-34, which states that:

> The goal of this paper is to provide a CBIR system that is scalable to large
> size image collection and is based on an effective indexing module that
> solves both high dimensionality and non-Euclidean nature of some color
> feature spaces. The module is built using an adaptation of k-means
> clustering in which the metric is a non-Euclidean similarity metric and the
> cluster prototype is designed to <u>summarize the cluster in a manner that is
> suited for quick human comprehension of its components</u>. These
> prototypes give the system the capability of <u>quick browsing through the
> entire image collection</u>. The proposed system also uses a branch and bound
> tree-search module that applied to the hierarchy of the resultant clusters will
> <u>facilitate rapid calculation of the nearest neighbors for retrieval</u>. (Page 378,
> lines 25-34) (emphasis added)

The applicant respectfully asserts that clustering images is not the same as <u>specifying</u> a first common feature <u>as a search criterion</u>. Although clusters of images can be browsed or searched (i.e., to "facilitate rapid calculation of the nearest neighbors"), the applicant respectfully asserts that clusters do not <u>specify</u> a first common feature <u>as a search criterion</u>.

For at least the foregoing reasons, the applicant respectfully submits that the rejection of claim 1 and its dependent claims should be withdrawn.

<u>Claim 29 and its dependent claims</u>

As amended, claim 29 is directed to a computer program product tangibly embodied in a machine-readable storage device and includes instructions operable to cause a programmable processor to combine information obtained based on each of the plurality of reference objects pertaining to the first common feature to produce composite reference information that specifies the first common feature as the search criterion. For at least the same reasons set forth above with respect to claim 1, claim 29 and its dependent claims are allowable over Stan.

<u>Claim 57</u>

Claim 57 is directed to a system and includes means for means for combining information obtained based on each of the plurality of reference objects pertaining to the first common feature to produce composite reference information that specifies the first common feature as the search criterion. For at least the same reasons set forth above with respect to claim 1, claim 57 is allowable over Stan.

Section 103 Rejections

Claims 8-23, 25, 27-28, 36-51, 53, 55-56, and 58-59 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Stan in view of U.S. Patent No. 5,751,286 ("Barber").

Claims 8-23, 25, and 27 depend from claim 1 and are allowable for at least the same reasons set forth above with respect to claim 1.

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Claim 8, as amended, is allowable for the following additional reason.

The examiner stated that:

> Stan does not explicitly disclose combining and comparing reference
> information. However, Barber teaches combining information pertaining to
> a second feature common to the plurality of reference objects to produce
> additional composite reference information representing criteria for the
> search (i.e. to produce extra criteria for the search, the system allows the
> use of a <u>drag and drop feature</u>, column 5, lines 13-26), and comparing the
> additional composite reference information to information pertaining to the
> second feature for each respective one of the plurality of media objects in
> the collection of media objects to identify one or more media objects (i.e.
> an image query is run to identify similar media objects using thumbnail
> identification information previously stored, and implemented with the <u>drag
> and drop method</u>, column 5, lines 13-38). (emphasis added)

The applicant notes the examiner's acknowledgement that Stan does not explicitly
disclose combining and comparing reference information. However, Barber does not teach or
suggest the features recited in claim 8, as amended.

Barber discloses predefined image characteristics and includes a set of one or more
thumbnails (icons) corresponding to various values of the image characteristics arranged by a
user into an example scene. *See, e.g.*, col. 3, lines 9-22 ("the image query window therefore may
enclose a set of thumbnails ... selected and arranged by a user into an example scene"); and col.
9, lines 62-67 ("<u>Dragging and dropping</u> thumbnails ... onto the example image window permits
a user to create an example of the kind of image which the user wishes to find.").

In contrast, claim 8, as amended, recites combining information obtained based on each
of a plurality of reference objects pertaining to <u>a second feature common</u> to the plurality of
reference objects to produce additional composite reference information that specifies the second
common feature as an additional search criterion. The applicant respectfully asserts that
arranging thumbnails into an example scene is analogous to creating a collage of images. The
applicant respectfully submits that common features are irrelevant in the context of arranging the
thumbnails, which the examiner suggests is the applicant's claimed plurality of reference objects,
into an example scene. Therefore, Barber neither teaches or suggests combining information
obtained based on each of a plurality of reference objects pertaining to a feature, let alone a

second feature, nor using any feature (e.g., comparing the additional composite reference information to information pertaining to the second common feature, as also recited in amended claim 8), common to the plurality of reference objects.

The applicant submits that claim 8 is allowable for at least these additional reasons.

In addition, for at least similar reasons, arranging thumbnails into an example scene is not the same as specifying a second common feature as an additional search criterion, as also recited in amended claim 8.

The applicant submits that claim 8 is allowable for at least this additional reason.

Claim 28 is directed to a method and includes receiving a plurality of reference objects to define two or more features common to a plurality of reference objects as a search criteria; and combining information obtained based on each of the plurality of reference objects pertaining to the two or more common features to produce composite reference information that specifies the two or more common features as the search criteria. For at least the same reasons set forth above with respect to claims 1 and 8, claim 28 is allowable over Stan and Barber, alone or in combination.

Claims 36-51, 53, and 55 depend from claim 29 and are allowable for at least the same reasons set forth above with respect to claim 29.

As amended, claim 56 is directed to a computer program product tangibly embodied in a machine readable storage device and includes instructions operable to cause a programmable processor to receive a plurality of reference objects to define two or more features common to a plurality of reference objects as search criteria; and combine information obtained based on each of the plurality of reference objects pertaining to the two or more common features to produce composite reference information that specifies the two or more common features as the search criteria. For at least the same reasons set forth above with respect to claims 1 and 8, claim 56 is allowable over Stan and Barber, alone or in combination.

Claim 58 depends from claim 57 and is allowable for at least the same reasons set forth above with respect to claim 57.

Claim 59 is directed to a system and includes means for receiving a plurality of reference objects to define two or more features common to a plurality of reference objects as search criteria; and means for combining information obtained based on each of the plurality of reference objects pertaining to the two or more common features to produce composite reference information that specifies the two or more common features as the search criteria. For at least the same reasons set forth above with respect to claims 1 and 8, claim 59 is allowable over Stan and Barber, alone or in combination.

Conclusion

For the foregoing reasons, the applicant submits that all the claims are in condition for allowance.

By responding in the foregoing remarks only to particular positions taken by the examiner, the applicant does not acquiesce with other positions that have not been explicitly addressed. In addition, the applicant's selecting some particular arguments for the patentability of a claim should not be understood as implying that no other reasons for the patentability of that claim exist. Finally, the applicant's decision to amend or cancel any claim should not be understood as implying that the applicant agrees with any positions taken by the examiner with respect to that claim or other claims.

The applicant requests a one-month extension of time to file this response to and including Nov. 24, 2008. Please apply the required fee of $130.00 (Petition for One-Month Extension of Time) and any charges not otherwise paid or any credits to deposit account 06-1050.

Respectfully submitted,

Date: November 24, 2008

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